

Serial No. 10/694,192

Atty. Doc. No. 2000P20254WOUS

Amendments to the Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any canceled claims at a later date.

1.-24. (cancelled)

25. (currently amended) A combustion chamber comprising:

an outer wall structure surrounding an internal area;

a cooling air inlet orifice arranged on the outer wall structure for cooling air near a hot gas outlet orifice, the cooling air inlet orifice opening into a cooling air channel;

a burner projecting into the internal area;

a housing extending from the burner to the hot gas outlet orifice;

a stiffening rib arranged on a surface of the housing and oriented in an axial direction in the direction of hot gas flow, the stiffening rib sized and configured to reduce stress in the housing;

an inner wall offset from the outer wall structure, the inner wall formed by a surface of the housing and cooled by convection by an air stream flowing between the outer wall structure and the inner wall, the air stream being conducted in a closed cooling air channel; and

an outlet opening for the cooling air from the cooling air channel via which the cooling air is conducted to the burner for combustion purposes,

whereby between the cooling air inlet orifice and the outlet opening the majority of the surface of the housing is cooled by convection by the cooling air stream.

26. (currently amended) The combustion chamber as claimed in claim 25, wherein the housing is made of sheet metal, ~~in particular~~ having a wall thickness between 3 mm and 10 mm.

27. (previously presented) The combustion chamber as claimed in claim 26, wherein the housing is interlocked with the wall structure in the area of the hot gas outlet orifice.

28. (previously presented) The combustion chamber as claimed in claim 26, wherein the wall structure has at least one cooling air inlet orifice in the area of the hot gas outlet orifice.

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29. (currently amended) The combustion chamber as claimed in claim 25, wherein the housing has stiffening ribs on its outer surface.

30. (previously presented) The combustion chamber as claimed in claim 25, wherein in the area of the burner the housing has a device for insertion of the burner.

31. (currently amended) The combustion chamber as claimed in claim 25, wherein the housing is suspended ~~on the~~ from a wall structure by a suspension device.

32. (previously presented) The combustion chamber as claimed in claim 31, wherein the suspension device is formed by a plurality of fixing elements that are arranged around the perimeter of the housing and connected to the wall structure under tension.

33. (previously presented) The combustion chamber as claimed in claim 32, wherein the fixing elements are spring mounted at the end adjoining the wall structure.

34. (currently amended) The combustion chamber as claimed in claim 31, wherein the suspension device is designed such that the suspended housing can move both axially and radially with respect to an axis ~~running~~ extending in a lengthwise direction of the combustion chamber.

35. (previously presented) The combustion chamber as claimed in claim 32, wherein the fixing elements comprise bolts, each of which have at a first end an essentially hemispherical bolt head that is seated so as to allow tilting in a recess in a bolt holder mounted on the housing end, said recess being essentially hemispherical in cross-sectional view.

36. (previously presented) The combustion chamber as claimed in claim 35, wherein the second end of each bolt is fed through a guide hole in the wall structure and through a compression spring on the outer side of the wall structure, the compression spring being compressed against the outer side of the wall structure by means of a washer held at the second end of the bolt.

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37. (previously presented) The combustion chamber as claimed in claim 36, wherein the guide hole, viewed in cross-section, has a narrowing by means of which radial and/or axial movement of the housing can be damped.

38. (withdrawn) The combustion chamber as claimed in claim 25, wherein the housing is connected to at least one inner housing of an individual combustion chamber in such a way that during operation of the combustion chamber the thermal expansion component of the inner housing in the radial direction is essentially equal to the thermal expansion component of the housing in the radial direction.

39. (withdrawn) The combustion chamber as claimed in claim 25, wherein the housing is supported in the area of a hot gas outlet orifice and in the area of a burner installation receptacle.

40. (withdrawn) The combustion chamber as claimed in claim 25, wherein the surface of the housing is curved.

41. (currently amended) The combustion chamber as claimed in claim 25, wherein the housing is split in ~~a maximum of~~ one sectional plane.

42. (withdrawn) The combustion chamber as claimed in claim 25, wherein the housing consists of a number of housing sections, in particular of a number of groups of housing sections each comprising four housing sections, the housing sections having longitudinal ribs extending essentially over their entire length, which, when viewing the exposed edge of each longitudinal rib from above, run practically in a straight line.

43. (withdrawn) A combustion chamber as claimed in claim 25, wherein the combustion chamber is part of a gas turbine.

44. (withdrawn) A combustion chamber comprising:
an outer wall structure that surrounds an internal area;

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a housing arranged in the internal area; and

an inner wall offset from the wall structure, the inner wall formed by a surface of the housing and adopted to be cooled substantially by convection by an air stream flowing between the outer wall structure and the inner wall, the air stream being conducted in a closed cooling air channel.

45. (new) A combustion chamber comprising:

an outer wall structure surrounding an internal combustion area;

a cooling air inlet orifice arranged adjacent to an interlocking joint on the outer wall structure such that where cooling air enters a cooling air channel, a section of a housing is cooled by impingement cooling and the housing extends from the burner to the hot gas outlet orifice;

a burner projecting into the internal combustion area;

an inner wall offset from the outer wall structure, the inner wall formed by a surface of the housing and cooled by convection by an air stream flowing between the outer wall structure and the inner wall, the air stream being conducted in a closed cooling air channel; and

an outlet opening for the cooling air from the cooling air channel via which the cooling air is conducted to the burner for combustion purposes,

whereby between the cooling air inlet orifice and the outlet opening the majority of the surface of the housing is cooled by convection by the cooling air stream.